

BOWLING GREEN OUTER BELTLINE

Level 2 Screening Evaluation -- *DRAFT*

Criteria	Unit	E+C KySTM	E+C SDC	Final BG Outer Beltline Corridors			
				A	B	D	E
Engineering Considerations							
Length: Total	Miles	n/a	n/a	23.9	28.3	26.5	31.0
New Location	Miles	n/a	n/a	23.9	28.3	26.5	31.0
I-65 Widening	Miles	n/a	n/a	0.0	0.0	0.0	0.0
Utilization of Parkways	Miles	n/a	n/a	0.0	0.0	0.0	0.0
Estimated Pre-Construction Cost (\$) (Design, Right-of-Way & Utilities)	Million \$	n/a	n/a	\$34.00	\$38.09	\$34.58	\$39.59
Estimated Construction Cost (\$) (Roadway, Drainage, Bridge & Mitigation)	Million \$	n/a	n/a	\$421.64	\$481.21	\$441.43	\$472.69
TOTAL PROJECT COST (\$)	Million \$	n/a	n/a	\$455.64	\$519.30	\$476.01	\$512.28
RIVER CROSSINGS							
Bridge Length over the Barren River (ft)	Lin. Ft.	n/a	n/a	3,150	2,900	3,550	3,300
Bridge Length over the Drakes Fork (ft)	Lin. Ft.	n/a	n/a	1,250	1,250	1,250	1,250
Proposed Number of Bridges/Drainage Crossings	Number	n/a	n/a	3	5	3	5
Roads Crossed: Interstates, US & Major State Routes	Number	n/a	n/a	8	7	8	7
Other State Routes & Local Roads	Number	n/a	n/a	24	30	27	32
Proposed Number of Interchanges (Existing/Proposed)	Number	n/a	n/a	10	10	10	10
Proposed Number of Overpasses	Number	n/a	n/a	14	17	17	20
Maintenance of Traffic during Construction **	Rating	n/a	n/a	L	L	L	L
Constructability Rating (Terrain, Obstructions, Conflicts, etc.) **	Rating	n/a	n/a	L	M	L	M
Traffic Considerations							
BG Outer Beltline Average Daily Traffic (ADT) Forecast -- Average	ADT	n/a	n/a	16,010	13,640	13,720	11,680
BG Outer Beltline ADT Forecast -- Highest Segment	ADT	n/a	n/a	19,220	20,710	19,630	20,650
I-65 (Natcher to Nunn) ADT -- Highest Segment	ADT	84,029	97,309	86,170	88,750	89,660	92,550
% Change from E+C (SDC)	%	---	---	-11.5%	-8.8%	-7.9%	-4.9%
BG Outer Beltline (Natcher to Nunn) Congested Speed	mph	61.7	59.6	65.0	65.0	65.0	65.0
% Change from E+C (SDC)	%	---	---	9.0%	9.0%	9.0%	9.0%
I-65 Natcher to Nunn Congested Vehicle Hours of Travel (VHT)	VHT	27,600	32,400	31,360	32,120	32,160	33,030
% Change from E+C (SDC)	%	---	---	-3.2%	-0.9%	-0.7%	1.9%

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Regional Congested Vehicle Hours of Travel (VHT)	VHT	583,920	667,240	665,940	667,250	666,990	668,490
% Change from E+C (SDC)	%	---	---	-0.2%	0.0%	0.0%	0.2%
Regional Congested VHT for Trucks	VHT	71,330	77,960	77,750	77,850	77,970	78,080
% Change from E+C (SDC)	%	---	---	-0.3%	-0.1%	0.0%	0.2%
Warren County Congested VHT	VHT	172,340	204,050	197,670	199,460	198,570	200,590
% Change from E+C (SDC)	%	---	---	-3.1%	-2.3%	-2.7%	-1.7%
Warren County Non-Freeway Congested VHT		130,670	155,810	143,580	145,560	144,250	146,380
% Change from E+C (SDC)	%	---	---	-7.9%	-6.6%	-7.4%	-6.1%
Warren County Congested VHT for Trucks	VHT	17,640	19,730	18,980	19,140	19,200	19,370
% Change from E+C (SDC)	%	---	---	-3.8%	-3.0%	-3.7%	-1.8%
Edmonson County Congested VHT	VHT	11,240	15,150	14,900	14,750	14,890	14,760
% Change from E+C (SDC)	%	---	---	-1.6%	-2.6%	-1.7%	-2.6%
Edmonson County Non-Freeway Congested VHT		9,090	12,760	12,490	12,330	12,470	12,350
% Change from E+C (SDC)	%	---	---	-2.2%	-3.4%	-2.3%	-3.3%
Edmonson County Congested VHT for Trucks	VHT	1,440	1,580	1,540	1,530	1,540	1,530
% Change from E+C (SDC)	%	---	---	-2.5%	-2.9%	-2.5%	-2.9%
BG Outer Beltline Vehicle Miles of Travel (VMT)	VMT	n/a	n/a	434,890	400,390	403,500	368,930
Regional VMT	VMT	23,075,370	25,823,750	26,374,530	26,363,370	26,379,450	26,372,925
% Change from E+C (SDC)	%	---	---	2.1%	2.1%	2.2%	2.1%
Regional VMT for Trucks	VMT	3,826,380	4,063,940	4,105,200	4,104,630	4,106,510	4,106,700
% Change from E+C (SDC)	%	---	---	1.0%	1.0%	1.0%	1.1%
Warren County VMT	VMT	5,973,780	6,765,850	6,998,280	7,002,360	6,999,640	7,006,290
% Change from E+C (SDC)	%	---	---	3.4%	3.5%	3.5%	3.6%
Warren County Non-Freeway VMT	VMT	3,409,330	3,877,440	3,700,660	3,732,940	3,702,370	3,735,380
% Change from E+C (SDC)	%	---	---	-4.6%	-3.7%	-4.5%	-3.7%
Warren County VMT for Trucks	VMT	870,960	925,890	937,810	939,110	939,070	940,990
% Change from E+C (SDC)	%	---	---	1.3%	1.4%	1.4%	1.6%
Edmonson County VMT	VMT	495,570	648,340	637,810	632,670	637,060	633,040
% Change from E+C (SDC)	%	---	---	-1.6%	-2.4%	-1.7%	-2.4%
Warren County Non-Freeway VMT	VMT	357,050	495,640	483,550	478,250	482,790	479,030
% Change from E+C (SDC)	%	---	---	-2.4%	-3.5%	-2.6%	-3.4%
Edmonson County VMT for Trucks	VMT	77,740	82,820	81,010	80,850	81,020	80,850
% Change from E+C (SDC)	%	---	---	-2.2%	-2.4%	-2.2%	-2.4%

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Environmental Considerations*							
Aquatic/Terrestrial Ecosystems							
Water Quality Issues**	Rating	n/a	n/a	H	H	H	H
Ground Water Basins: Green River	Length crossed(mi)	n/a	n/a	0	0	0	0
Barren River	Length crossed(mi)	n/a	n/a	12.7	14.3	15.8	17.4
Streams: 1st Order (Intermittent)	Number	n/a	n/a	5	8	5	8
2nd Order (Perennial)	Number	n/a	n/a	1	2	1	2
3rd Order (Perennial)	Number	n/a	n/a	0	0	0	0
4th Order (Perennial)	Number	n/a	n/a	0	0	0	0
5th Order (Perennial)	Number	n/a	n/a	0	0	0	0
6th Order (Perennial)	Number	n/a	n/a	1	1	1	1
7th Order (Perennial)	Number	n/a	n/a	2	2	2	2
Total	Number	n/a	n/a	9	13	9	13
Open Water Habitats (Ponds & Lakes)	Acres	n/a	n/a	7.1	10.1	7.2	9.5
Floodplains	Lin. Ft.	n/a	n/a	9,095	10,616	8,886	10,378
Wetlands: Forested	Acres	n/a	n/a	0.0	0.0	0.0	0.2
Scrub/Shrub	Acres	n/a	n/a	0.0	0.0	0.0	0.0
Emergent	Acres	n/a	n/a	0.2	0.0	0.4	0.4
Aquatic Bed	Acres	n/a	n/a	0.0	0.0	0.0	0.0
Total	Acres	n/a	n/a	0.2	0.0	0.4	0.6
Wild and Scenic Rivers***	Yes/No	n/a	n/a	No	No	No	No
Big Trees (e.g., State Champion)	Number	n/a	n/a	0	0	0	0
Federal and State Species****							
Federally Endangered	Number	n/a	n/a	3	0	3	0
Federally Threatened	Number	n/a	n/a	0	0	0	0
State Listed Species*****	Number	n/a	n/a	6	2	6	2
Total	Number	n/a	n/a	9	2	9	2
Historic/Archaeological Impacts*****							
Historic Structures (Listed)	Number	n/a	n/a	0	1	0	1
Historic Structures (Potentially Eligible)	Number	n/a	n/a	5	2	4	1
Historic Districts (Listed)	Number	n/a	n/a	0	0	0	0

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Historic Districts (Potentially Eligible)	Number	n/a	n/a	1	0	1	0

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Archaeological Resource Potential	Rating	n/a	n/a	H	H	H	H
Archaeological Sites: National Register	Number	n/a	n/a	0	0	0	0
Historic	Number	n/a	n/a	3	3	3	3
Prehistoric	Number	n/a	n/a	8	8	8	8
Total	Number	n/a	n/a	11	11	11	11
Historic Cemeteries	Number	n/a	n/a	2	2	3	3
Socioeconomic Impacts							
Land Use: Farmland	Acres	n/a	n/a	997	996	1072	1073
Forest	Acres	n/a	n/a	173	301	212	340
Wetland	Acres	n/a	n/a	10	8	10	8
Residential/Business	Acres	n/a	n/a	0	0	0	0
Land Use: % Farmland	%	n/a	n/a	84	76	83	75
% Forest	%	n/a	n/a	15	23	16	24
% Wetland	%	n/a	n/a	<1	<1	<1	<1
% Residential/Business	%	n/a	n/a	0	0	0	0
Percent Prime Farmland (Estimate)*****	%	n/a	n/a	17	12	17	12
Large Forest Block (KSNPC)*****	Number	n/a	n/a	5	16	5	16
Large Forest Block (KSNPC)*****	Acres	n/a	n/a	10	182	10	182
Relocations: Homes	Number	n/a	n/a	36	31	54	48
Mobile Homes	Number	n/a	n/a	5	6	7	8
Businesses	Number	n/a	n/a	0	0	1	1
Schools	Number	n/a	n/a	0	0	0	0
Public Facilities	Number	n/a	n/a	1	2	0	1
Cemeteries	Number	n/a	n/a	0	1	0	1
Churches	Number	n/a	n/a	0	1	1	2
# of Railroad Tracks: Active	Number	n/a	n/a	1	1	1	1
Abandoned	Number	n/a	n/a	0	0	0	0
Utilities: Transmission Lines	Number	n/a	n/a	5	5	5	5
Pipelines	Number	n/a	n/a	4	1	4	1
Towers (Radio/Cellular)	Number	n/a	n/a	0	0	0	0
Water Towers	Number	n/a	n/a	0	0	0	0
Substations	Number	n/a	n/a	0	0	0	0
Fiber Optics	Number	n/a	n/a	1	1	1	1
Environmental Justice Issues**	Rating	n/a	n/a	M	L	L	L

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UST Facilities: Existing	Number	n/a	n/a	0	0	0	0
Abandoned	Number	n/a	n/a	0	0	0	0
Landfills (Old)	Number	n/a	n/a	0	0	0	0
CERCLA Sites	Number	n/a	n/a	0	0	0	0
RCRA Sites	Number	n/a	n/a	0	1	0	1
TRI Sites	Number	n/a	n/a	0	0	0	0
Geological Issues							
Number of Cave Entrances*****	Number	n/a	n/a	3	7	10	14
Sinkholes	Number	n/a	n/a	122	123	148	151
Sinkholes	Acres	n/a	n/a	153	161	172	175
Oil and Gas Wells	Number	n/a	n/a	7	19	15	27
Dry and Abandoned Wells	Number	n/a	n/a	6	8	8	9
Oil Batteries	Number	n/a	n/a	0	0	0	0
Quarries	Number	n/a	n/a	1	1	1	1
Coal Mines	Number	n/a	n/a	0	0	0	0
Managed Lands							
Federal Lands	Number	n/a	n/a	0	0	0	0
State Lands	Number	n/a	n/a	0	0	0	0
Nature Conservancy Lands	Number	n/a	n/a	0	0	0	0
City Parks	Number	n/a	n/a	0	0	0	0
Air Quality							
Project is in the 6-Year Plan***	Yes/No	n/a	n/a	Yes	Yes	Yes	Yes
Highway Noise							
Potential for Noise Impacts**	Rating	n/a	n/a	M	L	M	L

* Evaluation does not include any modifications to the existing Natcher Parkway or the Natcher Extension

** Denotes a probability, i.e., H – High, M – Moderate, L - Low

*** Denotes a Yes or No response

**** Denotes within 1 mile of the centerline

***** Does not include Federally Listed Species

***** Denotes within 1000 feet of the centerline

***** Denotes estimated percent of new terrain construction crossing prime farmland

***** Large Forest Blocks identified by Kentucky State Nature Preserves Commission